

## **Adaptations**

Living things need to adapt to their environment to survive. All animals and plants have special adaptations to help them succeed. To survive, animals and plants need to find food and water and they need to reproduce. Some animals may look for or build their own home or shelter. Animals also have to avoid being eaten by predators. They also compete with other animals for food, water and when they need to find a mate.

### **Examples of Adaptations**

Animals may have any or a few of the following features so that they can adapt better to their environments.

- speed
- building or finding a home, shelter or hiding place
- camouflage

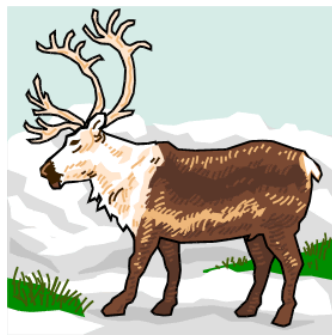
- migration
- hibernation
- ways to keep warm or to keep cool
- ways to save energy
- keen sense of smell, hearing, sight
- defense (horns, sharp teeth and claws, thorns, kicking, loud noise)
- size (elephants are too large for most predators)
- poison to kill prey or to scare away other animals
- living in groups
- storing food or water
- being alert at all times (watching for predators)
- sleeping standing up

Animals that adapt better have a better chance of survival. Those that cannot adapt are less likely to survive.

## **Animals of Cold Lands**

Living things have found ways to adapt to many different habitats. Some live in the coldest places on our planet near the north or south poles. During the coldest months of the year, many of these animals may travel to warmer places (migration). Some live in these harsh environments all year round, but have found other ways to adapt. Some live on the tundra. Others live in or near the sea. The following are a few animals that live in some of the coldest places on Earth.

**Caribou**



- antlers
- thick fur coat
- calf can run soon after birth
- live in large herds
- eat moss and leaves (food found on the Arctic Tundra)



## Walrus

- thin fur for swimming (a thick fur will slow it down in water)
- strong, flat flippers for swimming and moving on land
- live in large groups
- long tusks for protection
- eat clams and shrimp



## **The Arctic fox**

- has thick fur to keep it warm
- brown fur in the summer
- white fur in winter for camouflage



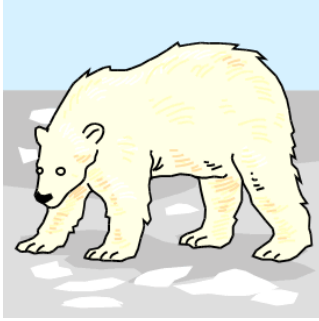
## **The Musk Ox**

- two curved horns
- short, strong legs
- has two coats of brown fur to keep warm
- live in small herds
- form circles to protect their young



## **The Emperor Penguin**

- shiny, smooth and waterproof feathers for swimming
- powerful beak for catching fish
- use wings like flippers for swimming
- live in large groups called rookeries
- eat fish, squid, and krill
- lay only one egg and both parents (female and male) take turns taking care of the egg.



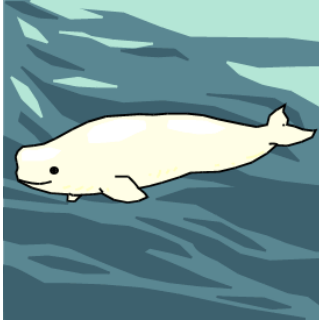
## **Polar Bear**

- a thick, white coat to keep warm and for camouflage
- builds snow dens to raise its young
- fierce, powerful and fast to catch large prey
- good swimmer



## **Killer Whale**

- world's fastest swimmer and a great predator
- live in groups
- babies can swim when they are born



## **Beluga Whale**

- breathe through a blowhole on top of its head
- a mammal that has adapted to live underwater
- blubber under the skin to keep it warm
- smooth and rubbery skin to help it swim faster



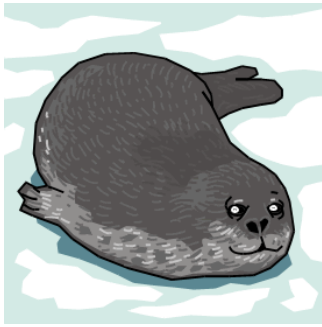
## **Arctic Tern**

- webbed feet for swimming
- migrate very long distances each year
- can eat while flying (insects) so they don't



have to land often

- eat fish and shrimp
- both male and female incubate the eggs (sit on them)
- live in large colonies



### **Weddell Seal**

- short, thick, gray fur to make it easier to swim
- thick layer of body fat under skin to keep warm
- large eyes to see better
- strong and powerful teeth
- use flippers for moving on land and swimming in the water
- can dive very deep
- eat fish and squid

## **Animals and Plants of Hot Lands**

Some animals live in the hottest places on our planet. These places are closer to the equator. Some of these places are called deserts because they are very dry. Deserts get very little rain. Some animals have found ways to adapt to live in these dry places.

Others live in rainforests where you get a lot of rain. Many live on grasslands or other places close to a river, lake, or other sources of water. All living things need water and food to survive. Plants usually make their own food using only water, air, and sunlight. The following are a few animals and plants that live in some of the hottest places on Earth.



## **Camel**

- a hump on its back to store food
- large and padded feet for walking on sand (don't sink easily)
- long legs for running fast
- long and dark eyelashes to protect against sunlight and sand
- a sandy brown color for camouflage
- can go days without eating or drinking
- adapted well to hot, dry deserts



## **Crocodile**

- eyes and nostrils on top of its head
- can hide underwater with only the eyes and nostrils out of the water
- lie very still for a long time waiting for prey
- sharp teeth and long, powerful jaws to grab prey and pull it underwater
- eat their food underwater
- strong tail used for swimming



## **Elephant**

- use their trunks for eating and drinking
- their long, bendy trunks let them reach and pick food from down on the ground or high on the trees
- eat for eighteen hours every day
- don't sleep for long

- roll in the mud and dust to keep cool and to protect themselves against insects and sunlight



## **Hippopotamus**

- eyes, nostrils and ears on top of its head to see and breathe easily when the hippopotamus is mostly underwater
- swim in the river and take mud baths during the day to keep cool
- eat grass and plants (usually in the evening when it is cooler)



## **Tiger**

- orange and black stripes help these predators camouflage in the grasslands where they stalk other animals
- huge front paws and strong jaws for hunting
- long, sharp teeth for biting the neck of its prey
- swim in the water to keep cool



## **Giraffe**

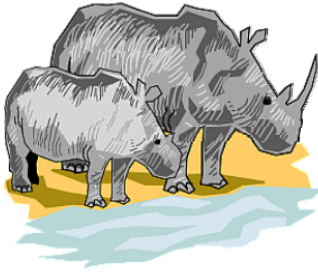
- tallest of all animals (easy to reach food high on trees)

- young can stand up and walk as soon as born
- leaves give enough water to live on.
- sleep standing up (safer)
- use long tongue to reach and grab food



## **Zebra**

- faster than a lion
- can see, smell, and hear very well
- live together in herds
- stripes make the herd look like a giant animal and harder for predators to separate one from the herd
- eat the tips of the grass
- alert and ready to run away



## **Rhinoceros**

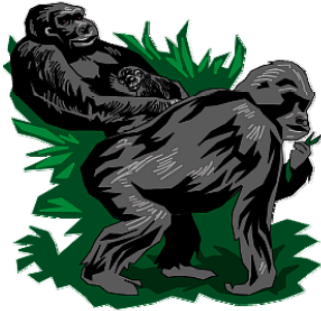
- horns on its nose for protection
- tough, leathery hide
- excellent hearing
- mud baths keep them cool



## **Lion**

- very sharp teeth for eating meat
- strong claws
- stalks its prey by hiding in the tall grasses
- can run fast and pounce on its prey and grab the prey by the neck
- work in a group (pride) to hunt large prey (even elephants)





## **Gorilla**

- intelligent and social (live and travel in groups)
- very strong
- scare off enemies by beating their chests and making loud noises
- teeth are adapted to eat leaves, stems, and fruit (herbivorous)



## **Cactus**

- a plant that is adapted to live in a hot, dry

desert

- stores water in its stem
- thick, shiny "skin" to reflect sunlight
- thorns to keep away animals



## **Rainforest Orchids**

- a rainforest plant
- most grow on tree trunk and branches
- roots anchor them to the tree branch but don't reach the ground
- orchids soak up water from the air



## **Strangler Figs**

- a rainforest plant
- start life as epiphytes growing on a tree branch
- roots drop to the ground
- roots wrap around the tree
- can kill other trees



## **Pitcher Plants**

- a rainforest plant
- cannot make enough food as a plant
- use nectar to attract and trap insects
- use insects as a source of food